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ABSTRACT

Following a literature review on speech and language development of twins, case studies are presented of six sets of identical twins screened for entrance into kindergarten. Five sets of the twins and one boy from the sixth set failed to pass the screening test, particularly the speech and language section, and were referred for therapy to correct articulation and/or language delays. Conclusions drawn from the research review and case studies include: (1) identical twins tend to have delays in speech and language development; (2) speech and language problems typically include articulation disorders, low vocabulary scores, delays in expressive and receptive language skills, stuttering, and a secret "twin talk" (idioglossia); (3) speech/language development does not seem to be affected by birth history, birth order, nursery school experience, or educational background of the parents; (4) twin boys seem to have more speech and language delays than twin girls; (5) twins who develop "twin talk" are those who are rarely separated; and (6) the earlier that speech and language delays are identified, the better the chances of successful treatment. The paper contains a twin questionnaire for mothers and concludes with guidelines for parents to determine their child's level of language development and suggestions for improving language skills. Two charts for use as guides to speech and language development are included. (JDD)

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SPEECH AND LANGUAGE DELAYS IN IDENTICAL TWINS

by

Pat Bentley

May 15, 1988

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CHAPTER ONE

I. FOCUS OF THE QUESTION

My research project was on speech and language delays in identical twins. I wanted to learn whether speech and language problems are common in identical twins. "Twin talk", (which is termed idioglossia, and is a language made up by the twins themselves that only they understand) was of interest to me because of its effect on normal speech and language development. I wanted to learn the percentage of twins that develop this talk and the reasons why some twins develop this talk and why others do not. Finally, I was curious to learn what speech and language pathologists should do about "twin talk" and what advice they should give to parents about their twins' speech and language development.

This research will help me in my work as I am currently working with identical twins. Knowing what advice to give to parents in the future will also be most helpful.

II. RATIONALE OF THE FOCUS

I am a speech and language pathologist in a school that has kindergarten through grade two. The school is located in the northwest suburbs of Chicago. The children are predominantly white and the families have medium incomes.

I work with children who have speech and language delays. My work begins with testing children and diagnosing their articulation and/or language delays. Once diagnosed as having speech and language delays the children are enrolled or staffed in my program through a parents conference, where the parent gives written consent. The children are placed in small groups according to their grade level and common speech and language delay. The children are seen on the average of two times a week for thirty minutes each session. Each child has an individual goal which is based upon test data. For example: John will improve articulation skills on the "r" sound or Jennifer will improve her receptive language skills.

I first became interested in identical twins in September of 1995. We had six sets of identical twins enter kindergarten in August of that year. Of the six sets of identical twins five sets had speech and language delays that I diagnosed as severe to moderate. Through parent conferences I learned that many of the sets of identical twins had developed their own "twin talk."

I then became more curious about identical twins and their speech and language development. My research project focuses on the following questions:

1. What percentage of identical twins have speech and language delays?

2. What percentage of identical twins develop their own "twin talk"?

3. Why do some twins develop this talk and not others?

4. Does this twin talk affect, interrupt or delay normal speech and language development?

5. What advice should the speech and language pathologist give parents about this talk?

III. RESEARCH METHODS

In order to study speech and language delays in identical twins my research includes the following methods:

1. Books and journals were read covering the topics of speech and language development and delays in twins, speech and language delays in identical twins,and "Twin Talk".

2. I interviewed parents of identical twins.

3. I developed a questionnaire about speech and language development and possible problems and distributed to parents of identical twins.

4. Case studies that were comleted of the twins with whom I have worked were sometimes used.

5. Test scores of speech and language tests given to identical twins were used to document the twins' speech and language delays.

6. Information received by universities doing research on twins was also used in writing my research.

7. Information from local as well as national twins clubs was used in writing the research.

IV. TIMELINE

February through April - I wrote and completed the proposal.

April through June - I did research to answer to the questions in the rational.

June through August - I continued extensive reading and began to formulate questions for the questionnaires and interview.

August through October - Universities that are doing research on twins were contacted as well as parents of twins and twin clubs in the area.

October through December - The questionnaire was completed and I began documenting the data collected on the various twins.

December through March - Data was still being collected and

documented and I wrote Chapter Three.

March through April - I developed the chart summarizing the results of the questionnaire and a release of information form. Charts on language development were gathered and copied and the bibliography was up-dated.

May - I re-wrote several sections of the paper, re-wrote proposal, made final changes, and took photos of the various twins.

V. READING PLAN

I read:

1. About speech and language development in twins.

2. To answer the questions included in the rational section.

3. To answer the additional questions that arose as I did my reading and interviews.

CHAPTER TWO

Since 1985 I have been working with several sets of identical twins in my speech and language program. The twins speech and language delays have "sparked" many questions for me. I must say I agree with Malmstrom and Selva(1986) who wrote "One of the most interesting and one of the least studied areas in the developmental literature is the aquisition of language in the special setting that twinship provides".

In this chapter I plan to review the studies that have been done on speech and language of identical twins. I plan to try to answer the questions that were raised in my rational and report what findings were made in my review of the literature. The remainder of my paper will be devoted to reviewing my findings with twins and sharing the results of a parent-and-twins survey. I will also include suggestions for parents of identical twins offering advise to help their twins develop normal speech and language.

I. WHAT IS THE NATURE OF THE SPEECH AND LANGUAGE DELAYS IN IDENTICAL TWINS?

Since the 1930's it has been recognized that twins are slower in their language development than singletons (Day 1932., Davis 1937). Day showed a clear and striking inferiority of twins compared with singletons in respect to reduction of vocabulary,

the use of immature and primitive sentence construction, and a poverty in the use of constructions involving classifications, abstractions and conceptualization. Alm (1957) stated that many twin children whose overall intelligence is normal show significant deficits in their verbal performance. (Mittler, 1976). Alm found that by the age of four twin children were six months behind singletons. In 1956 Berry stated that "Twinning creates a special environmental influence which seems to be disadvantageous for speech learning and language development. Twins begin to speak later than do single children and are significantly retarded, at least until the age of six, in their ability to produce sounds correctly." Barry characterized the speech of twins as having substitutions and distortions of sounds for a much longer period than that of single siblings. He stated that consonants are often omitted so that speech may be difficult to understand. Consonant substitutions such as "w" for "r", "d" for "th", and "t" for "th" or "s" are frequent.

In Koch's study of 90 pair of 5-6 year old twins she found that twins were less talkative than singletons and showed particularly poor scores on verbal tests.(Mittler (1976).

The most comprehensive large study of speech development was that by Mittler (1976). He studied 200 4-year old twins and applied the I.T.P.A. (Illinois Test of Psycholinguistic Abilities) which includes subtests for nine different aspects of speech development. He found that twins performed less well than singletons in all except one subtest and the exception was for speech reaction to speech. His study confirmed that young twins

show a marked delay in language development. This delay averaged 6 mos. at the age of 48 months compared to control groups of singletons.(Mittler, 1976).

In 1978 the La Trobe study, which is an ongoing research project which now encompasses 1,624 children, including 471 sets of twins, found that language development was the most common parent concern. Their conclusions show it not unusuel for twins to be at least one month behind singletons saying their first word. The researchers have found that male twins show delays and defecits in language and in reading skills that are not found in female twins and singletons. They found that 75% of the twin boys were not showing satisfactory progress and many required speech therapy (Segal, 1984). They also stated that "it is very likely pre-school language problems contribute to later difficulties in reading" (Segal, 1984). Parents of one third of the male twins in this study recalled that their twins experienced earlier difficulties in language. In fact Segal states,(1984), "that 92% of the twins in this study did eventually develop reading problems."

In 1985 Segal(1985)found the following:

1. Twins demonstrated less verbal proficiency than non twins, as indicated by relatively reduced amount of speech. Their speech was rated as relatively less mature.

2. Identical twins scored below fraternal twins in

vocabulary skills, rate of speech and rate of speech by mother and father to child.

3. Overall vebal exchanges, displays of affection, verbal commands or suggestions, statements of approval, and rule enforcement were offered less frequently by parents of twins than by parents of single children.

4. Relationships between birth history factors (pregnancy complications for example) and language development in the identical and fraternal twin groups were not found.

5. Twins displayed a higher rate and percentage of attachment behaviors than did singletons. Parents of twins and singletons did not however differ in their encouragement of independent behaviors. Dr.Lytton and his coworkers have suggested that the reduced displays of affection shown by parents of twins may lead to less mature behaviors on the part of their children.

Segal(1985) stated that, "it is interesting that the twin-singleton difference in verbal ability at 2 1/2 yrs. old was not related to birth history events but to the home social situation. Fraternal twins did not show reduced verbal ability." Segal also found that more twins than non twins received speech therapy between the ages of two to nine years of age.

Theroux and Tingley (no date) state that "Twins generally have more difficulty and are slower in developing proper speech

habits than the average child. Stuttering, poor articulation, incorrect pronunciation and a secret twin language are some of the problems."

II. WHAT IS TWIN LANGUAGE?

A. Why do some twins develop idioglossia, or twin talk?

B. Does this twin language delay normal speech and language development?

Segal (1985) wrote that is may be helpful to recall an experience on your own in which you and another person thoroughly enjoyed particular words or phrases that exactly captured a feeling or mood. This she says is the essence of twin talk. Segal states that twin language is not just limited to verbal exchange. A great deal of information can be conveyed by a knowing glance. When put into these terms, Segal stated, twin language may seem less magical yet does provide a meaningful and realistic approach toward understanding this aspect of twin behavior.

Joy (1979) describes twin talk or idioglossia as a "private communication system" most commonly occurring in twins. Idioglossia or twin talk, Joy states, also occurs between singletons and between other siblings of multiple births. These communication systems, Joy states, range from manual gestures to a fully developed verbal language with its own grammar. Some studies report that 40-50 percent of all twins use "secret

language". Joy, (1979) further states that twin talk or idioglossia is a "phenomenon" that may develop between siblings who are very near one another in age. Joy states that it is a "private communication system" most commonly occurring in twins between the ages of one and two.

Scheinfeld (1967) describes twin talk or idioglossia as "consisting of twisted or made-up words and peculiar sounds, gestures, expressions, and so on, intelligible just to themselves."

Davis and Orange (1978) define idioglossia very simply as a communication system shared by two that is unintelligible to others. They state that it is not uncommon, that a study done in England found that of 100 sets of twins, 47 had used such speech at an early age.

Theroux (no date) further states that there seems to be two degrees of twin language or idioglossia:

1. Mild - The twins were able to speak English as well as their own private language. The twins used their secret language only when they were with each other and the secret twin language stopped entirely by the time they entered school. The parents were not overly concerned about the twin language and did not think of it as a problem.

2. Severe - The twins spoke few English words and mainly used their own language.

An example of a severe case of idioglossia in twins is that of the Kennedy twins who retained their twin talk until the age of seven, and they developed it to such a degree that they seemed able to communicate about all kinds of things. The twins had no friends-they preferred to play indoors. The Kennedy parents (Davis and Orange, 1978) avoided the language problem until the girls were six and it was time for school. They were tested and placed in a school for the Trainable Mentally Retarded. But, they stated picking up things so quickly that the teachers began raising questions as to whether they belonged in that school.

Another severe case of twin talk can be noted in the Gibbons twins (Gibbons 1986). June and Jennifer Gibbons communicated with each other in a strange speeded-up "patioslike" English, but rarely did they speak to others who sought to penetrate their close world. Today at the age of 23 they live behind walls in a maximum security hospital for the criminally insane near London. They were sentenced in 1982 after a reckless spree of arson and petty theft. Although they cannot speak, their story is being told in a new book by Wallace called the The Silent Twins.

Rosemary Theroux (no date) reported on her surveys done by parents of twins. These parents described their twins' language as:

1. A combination of words put together (i.e., bangnono).

2. Not understandable (except for a few words).

3. Shortened or mispronounced words.

4. Sounding like a foreign language with the last letter of many words unpronounced.

5. Sounding like gibberish.

6. A few English words, but basically sounding foreign. Fork was "re"; music was "mingo"; ear was "ye".

7. Special words for things that no one knows.

Some parents noted that:

The twins always could understand each other, while the remainder of the family could not.

The twins spoke English as well as their own "secret language".

The twins spoke special words only to each other and seemed to have no problem understanding each other.

Others had difficulty understanding them, but the mother had no problem.

A. Why do some twins develop idioglossia or twin talk?

Davis and Orange (1978) stated that they found that very

little is known about twin speech and that it hasn't been studied in depth before, nor has much ever been written about it. Davis and Orange further explained that perhaps twin speech happens because twins learn words from each other rather than from the adults around them. One linguist recorded a kind of verbal play that took place between her own two-year-old twins. Alone together, they happily tossed nonsense syllables back and forth, imitating each other, and then going on to experiment with the sounds like jazz musicians improvising on a theme (Davis and Orange 1978).

Susan Taylor, a teacher who worked with the Kennedy twins, speculated why they persisted in their twin talk so long. Susan believed their were several reasons:

1. the twins had a bilingual environment

2. they grew up isolated from other children and dependent on each other.

3. they had no formal education or speech therapy until the age of six. (Davis and Orange, 1978).

Davis and Orange said that twins are often slow to develop language and some linguists have suggested that they focus too much on each other. Twins are constantly together and at the same stage of development so that they may understand each other quite well without elaborate verbalization.

Arnstein (1979) explains that twins spend a great deal of time together without much stimulation from adults. They sometime communicate with each other in a language all their own, understood clearly by themselves, but by no one else.

In the book Bridge of San Louis Rey, Wilder (also a twin) tells about Manuel and Estiban, identical twins who develop a secret language early in life. This language, Wilder wrote, "was the symbol of their profound identity with each other."

Davis and Orange (1978) stated that what seems most significant about twin speech is that it clearly demonstrates the drive to communicate, one so strong that if they have to they'll invent their own communication code. (Davis and Orange, 1979).

B. Does this twin language delay normal speech and language development?

Segal (1985) states that parents will be relieved that twin language need not interfere with the appearance and progression of normal speech. Several cases, one by Luria and Yudovitch in 1959 and another by Douglas and Sutton in 1978, have demonstrated that when twins are encouraged to interact with others and/or are provided with language therapy, language skills improve remarkably. Twin language rarely lasts past childhood. An occasional "twin word" might slip out, but usually when the twins are by themselves.

In his study, Mittler (1976) found the incidence of idioglossia to have a negligible effect on the scores of

four-year-old twins to whom he administered the Illinois Test of Psycholinguistic Abilities.

Schienfeld (1967) remarked that the special "twin language" may not be entirely a hindrance. The purpose, he states, of any language is communication, and it is possible that by using their own made-up words. Many twins begin developing this art sooner than do most singletons. No one seems to have divided twins into two groups, those who used "twin language" and those who did not, and checked to see whether the first group continued to be academically retarded in any way.

Thomas (1979) states that none of the studies on language retardation in twins has tested the relationship between the use of "twin language" and continuing academic retardation. In spite of the different conclusion reached by researchers into twin language development, retardation became a commonplace knowledge, accepted by both scholars and the press. Despite the lack of data Thomas further states that idioglossia is often named as the culprit responsible for the apparant slowness of twins to develop language.

III. WHAT IS THE REASON THAT IDENTICAL TWINS HAVE DELAYS IN SPEECH AND LANGUAGE?

McInner (1984) stated that language delays are generally thought to be the result of one or more of the following:

1. A large number of twins are premature or have birth complications that could contribute to a delay in speech.

2. Premature babies tend to be more irritable and do not respond well to stimulation in their early months. Therefore parents may not be able to interact verbally as much with them in the beginning and thus set a pattern for later.

3. The fact that there are two babies to care for and work overload on the part of the parents may mean less time for verbal interaction even when prematurity is not a factor.

4. Twins who spent a lot of time together may use body language, facial expressions and parts of words to communicate with each other. They lack the logic to understand that adults and other children are not able to understand this "private language" or to see a need to communicate in other ways.

5. When twins are together or in the company only of other children most of the time the language model they copy is immature making the development of language slower.

6. Parents may not spend as much time in early word, color, or picture identification games with twins as they would a single child. Even if they do make a effort it may be that they are trying to teach both children at the same time, giving each child less time than a single child would receive.

McInner further stated that the Louisville twin study reports that the birth order in the family has a significant effect. If twins are the first offspring of the family they are said to progress faster in speech development than twins who are born later that is following several other children. The reason for this is that , they state, early born children have more access to their parents who provide the model for speech . Later born have access to their siblings as speech models and they are not as good a model.

The Louisville study and the Koch research both concluded that a girl twin's speech was usually better developed that that of boys. These studies also stated that the educational background of parents has a bearing on language development.

In a 1977 study of twins it was found that although parents used more speech with twins than did parents of single born children; they spoke less to each twin individually (Mc Innes, 1984). Thus, it is stated, each child was receiving fewer directions, less praise and less one-to-one communication from adults. The conclusion drawn from this was that the lower verbal skills apparent in twins was in part the parents fault.

Casille (1982) explains that with an animal companion there is no need for speech. This is particularly interesting because twins, especially very young ones, are not necessarily dependent on language for communication between themselves. Even as they grow older and acquire more language skills, twins repeatedly tell how they do not need to rely on language for the exchange of their

most important thought.

Mittler (1976) states that the reasons for these delays in speech and language are far from clear but offers two kinds of explanations. They are broadly characterized as biological and social. The biological explanation stresses the prenatal, perenatal and post natal hazards to which twins are exposed. Mittler (1976) explains that one in six twin pregnancies ends in death of one or both twins. More than half of all twins were less than 3500 g at birth, and their average gestation period is only 37 weeks. Over a third are breach births and the second born twin is held to be particularly at risk. Mittler (1976) states that we know that singleton children who are exposed to such early hazards are more likely to show problems of development, particularly in relation to the growth of the intellect and linguistic abilities in early childhood, and it therefore seems reasonable to invoke a biological explanation for the slower development in young twins.

Mittler refers to the social psychology of the "twin couple" and it has been suggested that twins have less need to communicate through language. Many of them develop a "private language" in their early years and some may isolate themselves to some extent from the language model normally provided by their mother.

In 1976 Mittler found that environmental factors, particularly social class and family size were strongly correlated with language scores. Middle class twins were relatively much more "retarded" in language development compared with middle class singletons than working class twins compared with working class

singletons.

Theroux and Tingley (no date) state that the reasons for twin speech and language difficulties are that twins:

1. Spend most of their time together and have only each other's improper speech to imitate.

2. Are so "in tune" with each other that a grunt or motion may be all that is needed to be understood.

3. May allow the more aggressive one of the pair to do all the talking for both so that the other does not learn to speak properly.

4. Often lack parental attention to their speech habits. Busy parents are not always aware of this aspect of twin growth.

Theroux and Tingley (no date) also stated that twins who have the greatest difficulty in acquiring normal speech and language are identical and close fraternals who are constantly in each others' company. Boys seem to have more problems than girls, probably due to initial immaturity.

Nobel (1980) also found speech development a fascinating development of twinship. He states that twins enjoy a special social situation in that they have each other as the most frequent speech model. Parents of multiples may think the babies are doing

fine, chattering away and amusing each other. Nobel further explains that some parents are too busy to devote much time to encouraging and correcting the twins' attempts at speech and as a result, twins are slower than singletons to develop language skills. Identical twin boys, he states, have taken as long as 18 months before saying their first word. There is a limited use of words, and mistakes and mispronunciations are prolonged. Pointing may also persist as a substitute for speech.

Savic has studied the pattern of communication between twins and their mothers. As a result of her close observation of three pairs of twins over a two year period from one to three years of age she concluded that twins pass through the stages of speech development in a different way to singletons. Twins have to develop a much more complicated form of interaction. They must learn to communicate imitation, learning, and stimulation. The main models for singletons are parents or older children. For the twins the main model is the other twin. Thus, Savic concluded, speech is likely to be immature and deviations from normal will be reinforced.

IV. WHAT ADVICE CAN THE SPEECH AND LANGUAGE PATHOLOGIST GIVE TO THE PARENTS OF IDENTICAL TWINS REGARDING SPEECH AND LANGUAGE DEVELOPMENT?

McInner (1984) states that the one area where parents can help their twins most is in language development. As the age for

early speech approaches, parents can be alert for any delays in the simple imitation of sounds like "ma ma" and "bye bye" that are expected towards the end of the first year. A physical check up will catch any hearing and vision problem that would be contributing to a delay at that point. McInner further states that parents can observe the way twins are communicating with each other to see if any "private language" is developing and watch for the "one twin" being the spokesman for both. To encourage further language McInner urges parents to begin the teaching process in the following ways:

1. Get eye contact and use each baby's name as you talk or sing to them while bathing or changing them.

2. Continue addressing each child by name and look directly into their faces as you give instructions or offer a treat. Even as adults we listen more attentativly if we are called by name when someone is talking to us.

3. Separate your twins for story time. You and your husband can take each child into a separate room. During the story encourage your toddler to say words back to you.

4. Approach the teacher or leader of play groups or nursery school and explain to her the need to talk to each twin as an individual and for her to encourage each twin to reply for himself.

5. Create situations in your neighborhood for your twins to

play alone with other children, if you cannot afford play school or nursery school.

6. Insist on some form of intervention like speech therapy if you feel your twins are not talking properly by the time they are three and one half years old. Don't let your doctor tell you that twins are naturally slow and will grow out of it.

Mc Inner further states that there is a natural temptation in our own busy lives to allow twins to amuse each other. In doing so, parents may be contributing to some of the reported delays in twins.

Hagedorn and Kizziar (1983) state that it is extremely important for parents to help with sound and language development by frequent repetitions. They state that it is crucial that parents do not anticipate their children's needs making verbal communication unnecessary. Often one twin will communicate his wants, and when he signals for a cookie both twins are fed. This gives his twin little need to communicate on his own, since he is satisfied with no effort on his part. It might be helpful, they state, if the parents were not quick to provide until each child attempted to use words to obtain what he wanted.

Nobel (1980) states that any speech difficulties should be screened by a speech therapist. She states that the children may have mechanical defects of the tongue or palate. Treatment, she says, is most effective the earlier it is begun. Experts advise

parents never to ridicule or make-fun of their twins speech. Baby talk is not to be encouraged. Communication skills should be nurtured by using clearly pronounced words and short sentences. Nobel further states that it is important to talk to the twins separatly so that each child learns to communicate as an individual. Nobel believes that all parents need to help their children develop independence . She states that separation usually enhances independence and that twins should be separated from the very beginning. Nobel states that twins don't have to be nursed, rocked, or played with together.

Theroux and Tingley (no date) give the following suggestions in their handout to mothers of twins:

1. Know what speech is expected at what age; if there is a problem, arrange for help as early as possible--before the twins state school if necessary.

2. Contact your school district to see if pre-school(ages three and four) screening and speech therapy is available. If not, request a referral to the nearest testing facility.

3. Encourage adults to use proper speech when speaking with your twins; discourage baby talk.

4. Use only correct words; do not repeat mispronounced words.

5. Insist that each twin speak for himself when expressing needs or advice.

6. Check with your pediatrician to make certain there are no physical impairments that could inhibit proper speech.

7. Ask older children in your family to help the twins learn new words.

8. Check these possible resources for speech therapists: pre-school speech facilities, elementary school speech services, and state or federal programs for children with learning disabilities.

9. Observe how your twins use English. If they seem to be developing their own language, have their speech evaluated.

10. Be patient and listen to the children. Give them a great deal of encouragement. Never make fun of their efforts to speak.

11. Read stories, play word games, and talk with your twins whenever possible. Encourage them to repeat words. Speak in front of the mirror; this will help them to see the various mouth positions when speaking.

12. Make sure that the twins have contact with other children frequently during the toddler years. Discourage them

from playing by themselves. Join a play group in your neighborhood or community if it is possible.

13. Find an understanding person who has had similar experiences and talk over your feelings or problems. Join a Mothers of Twins club.

14. Have the twins' hearing tested before they start to school. Be sure to get more than one opinion. Hearing loss contributes to the inability to speak properly.

15. Tape record your twins' language so that the children can hear their voices and speech when they are older.

16. Make a second copy for use by your doctor or speech therapist.

17. Get the best possible professional help. Make extensive inquiries before you decide who should treat your children.

18. Do not be afraid to ask doctors or therapists questions. Write questions down before professional visits so you remember what to ask. Make certain that professionals explain exactly what they are doing for the children. Be sure you understand all the medical terms used.

19. Contact the following associations for additional information and resources:

The American Speech-Language-Hearing Association
10801 Rockville Pike
Rockville, Md. 20852

The National Association for Hearing and Speech Action has a free information line that you may call collect: (301) 897-8682.

SUMMARY OF RESEARCH

Twins have been found to be delayed in speech and language development. Twins speak later than singletons and are less talkative than singletons. Stuttering, poor articulation, incorrect pronounciation and a "secret twin language" are some of the problems found in twins. Male identical twins show defecits in language which may contribute to later reading problems. More twin boys require speech therapy than singletons.

Twin talk or idioglossia has been described as a "private communication system" most commonly occurring in twins or as a communication system shared by two, unintelligible to others. It was found that 40-50% of twins use this "secret language." Idioglossia usually develops in the toddler years and disappears by school age and usually does not create problems or inhibit normal speech development. There have been a couple of bizarre and severe cases of idioglossia noted in research but those cases were extreme and most unusual. However, very little research has been done on idioglossia so I don't feel anyone can make concrete statements regarding idioglossia and its' effects on speech and language development.

Many reasons have been stated by researchers for the delays in speech and language development of twins. Some of these reasons are:

1. Twins are often pre-mature or have birth complications which could contribute to delays in speech development.

2. Parents seem to spend less time with twins than singletons.

3. Twins are in each others' company most of the time and only have each other to model.

4. Twins receive less speech individually than singletons.

5. Twins are not necessarily dependent on language for communication between themselves and sometimes develop a "private language".

Several reasons are stated in the research as possible contributing factors to delays in the twins speech and language development but it is impossible to pinpoint one single contributing factor. However, the research is very limited to the reasons for the delays and for the most part the reasons seem to be speculations by most researchers.

There are several things parents can and should do to stimulate normal speech and language development in their twins. These suggestions were previously listed and will be included at the end of my project.

CHAPTER THREE

Chapter three will be divided into three parts. Part one will be sharing important information from case histories and interviews from the identical twins and their parents with whom I have had the pleasure to work. Part two will be a chart sharing the results of my twins questionaire. Part three will consist of the final results and conclusions of my study of speech and language delays in identical twins. I am including a chart that can serve as a guideline for parents as well as suggestions for parents to help develop normal speech and language in their twins.

PART ONE

In April of 1985 five sets of identical twins (all boys) were screened by members of my school district for entrance into our kindergarten. All five sets of the twins failed to pass the screening test particularly the speech and language area of the test. Four sets of the twins failed to pass the test in more than just the speech and language section of the test and were eventually placed in our developmental kindergarten. Our developmental kindergarten is for children who we feel could not function well academically in our regular kdg. setting. The pace of learning is slower and at that time language development was a major part of the curriculum. It is a half day program and has only twelve children in attendance. Because of the small class size the teacher has more time for the individual needs of each

child. The teacher taught daily language lessons and I supplemented these lessons once a week with a speech improvement lesson based on the students' needs.

The fifth set of identical twins failed only the articulation section of the speech and language area, was separated and placed in our regular kindergarten program. These boys were already receiving articulation therapy in our pre-school program and had been since the age of three.

Besides the five sets of identical twins that entered kindergarten that year I was also working with one other boy who was an identical twin. So, to summarize, I was working with six sets of identical twins all having articulation and/or language delays. In this next part of this chapter, I will share some information from tests, case histories, and interviews with the identical twins and their parents. I am including some information taken from their questionnaire and from my experience working with them. I am also including a little information about the type of therapy each child received as well as the duration of the speech and/or language therapy.

The Moore children were born prematurely in October, 1979. One child was born with cerebral palsy. Mother reports their first words were at one year and that they spoke in sentences at two. The twins did not attend nursery school. They were screened in April, 1985 for our kindergarten and failed to pass the kindergarten test. When I gave them an articulation and language test in September, one child scored two years below age level in

his oral language, use of oral grammar and in articulation skills. The other child had normal language scores but was two years below age expectancy in his articulation skills. Both children received speech therapy for one year and were dismissed as corrected. This set of twins did not have their own twin language and are currently functioning normally in school.

The Ellis children were born two months premature and by ceascerian section. They moved to our district when the boys were in second grade and they were placed in separate second grade classrooms. When I screened them for speech and language delays, one twin was found to have a moderate articulation delay. He was placed in my program and received two years of therapy then was dismissed as corrected. Later, this same child was experiencing some difficulties learning and was diagnosed as having learning disabilities. Mother reports that they spoke thier first words at one year and spoke in sentences at two. This set of twins did not develop their own "twin talk" and they did attend two years of nursery school.

The Brown (ficticious last name will be used due to lack of parent consent for the release of information) were screened for kindergarten in September of 1985 and they failed several areas of the screening test and were placed in the developmental kindergarten. When given a language test they both scored two years below age expectancy in all areas of their language development. Both boys were placed in my program for language therapy. Both boys progressed well in their language skills that year. The following year they moved out of our district so I have

no information regarding their progress and I was not able to have their parents participate in my questionnaire.

The Dillon children were born full term in August, 1980. One of the boys was born with a facial anomalie and has had several surguries to correct it. Mother reports that they spoke their first word at eleven months and spoke in sentences around eleven months. The Dillon twins did use "twin talk". Mother reports that the twin talk began at eighteen months and ended at four years of age. Their "twin talk" consisted of "made up words" and these words were repeated twice. Mother gave the example of "doy-doy". No one else understood their "twin talk" and mother reported that she felt the "twin talk" interfered with the twins speech and language development. The Dillon boys attended two years of nursery school. Mother had the twins' speech and language tested in December, 1983 when they were three years of age and their language skills were found to be normal for their age but they were found to have moderate delays in their articulation skills. The boys were placed in our district's pre-school program at the age of three. Both boys received articulation therapy. They were dismissed as corrected in September of 1987. Both boys are functioning normally in their education.

The Stoller boys were born full term in November of 1980. Mother reports having some difficulties in pregnancy. The boys spoke their first word at one and a half and mother does not recall at what age they spoke in sentences. The Stoller children did not have their own twin talk. The boys attended nursery

school for two years. Both boys failed to pass the kindergarten screening test and they were placed in the developmental kindergarten class. When they were tested in September of 1985 both twins were below age expectancy in their language skills as well as in their articulation skills. The twins received language therapy for one year and were dismissed as corrected in September of 1986. Their articulation skills were monitered for one year. One twin did not develop out of a lisp and was placed back in my program for articulation therapy. Both boys are in a regular first grade class functioning normally.

The Nuyttens children were born two months premature in September of 1980. Both boys were only three pounds at birth and were reported as jaundiced at birth and had sucking and swallowing difficulties and apnea. Mother reports that the boys spoke their first word at nine to ten months and spoke in sentences at one and one half to two years of age. Mrs. Nuyttens reports that the boys did have their own "twin talk" that could be understood by the boys older siblings. Mother reports that the "twin talk" began at nine to ten months and ended when the boys were around three. Mother did not feel that the "twin talk" interfered with the boys speech and language development. Mother describes the "twin talk" as the boys would be "carrying on a conversation with words no one had ever heard before." The Nuyttens children attended one year of nursery school. The boys failed the kindergarten screening and were placed in the developmental kindergarten. The speech and language evaluation that was administered in September of 1985 showed both children having delays of one to two years in their language skills and in their articulation skills. The boys

received two years of language therapy as well as articulation therapy. In September of 1987 when the boys were re-evaluated one of the twins showed age appropriate language skills so that he no longer required language therapy. His articulation skills were still below age expectancy so he remained in my program for articulation therapy. The other twin did not show age appropriate language skills. In fact his language skills remained over two years delayed after receiving two years of language therapy. His articulation skills continued to show delays as well. This twin has had difficulties in school and has been recommended for further testing and evaluation.

Part Two

In this next part of this chapter I am including the twins questionnaire that I distributed to mothers of twins. A chart summarizing my results will follow the questionnaire. The questionnaire included questions that I feel are important to speech and language development. These questions were the key topics in the review of the literature.

TWINS QUESTIONNAIRE

1. Are you the parent of identical twins? yes____ no_____

2. Do or did your twins ever have any speech and language problems, or talk strangely? yes____ no____ (If you answered no to this question please just sign your name to the end of this form.)

3. Did you have any complications during pregnancy? yes____ no____

4. Did you have any complications at delivery? yes____ no____

5. Did the twins have any physical problems during infancy? yes____ no____

6. Where the twins born premature? yes___ no____

7. Are the twins the first____ second____ third ____ born children in your family?

8. Are your twins boys____ girls?____

9. At what age did the twins say their first words? Speak in short phrases? Say their first sentence?

10. Did your twins have difficulty with:

    a. Articulation skills [saying specific sounds correctly]? yes ____ no____

    b. Language skills [receptive or expressive difficulties]? yes____ no___

    c. Fluency or stuttering? yes____ no____

    d. Reading difficulties? yes____ no____

    e. Seperation problems? yes____ no____

    f. Jealousy problems? yes____ no___

11. Did your twins develop their own twin talk or twin language? yes____ no____.[If your answer to this question is no please go on to the next question].

    a. What age did this twin talk start?

    b. Did you or anyone else understand this twin talk?

    c. Do you feel that this twin talk was a problem or that it interferred with your twins' speech and language development?

d. When did this twin talk stop?

e. Did you consult a professional about his twin talk? If so who?_____ What was your answer or what advice were you given?

f. Can you describe your twin's language? example:sounding like a foreign language, made up words, parts of words. Please describe this twin talk as best you can.

12. Did you seperate your twins to do various activities when they were infants and toddlers? yes____ no____ Please describe these activities.

13. Did your twins attend nursery school? yes____ no____ If your answer was yes, how many years?

14. Were your twins in the same class? yes___ no____

15. Did the twins spend a great deal of time in each others' company? yes____ no____

16. Is one twin more dominate? yes____ no___. If your answer was yes, did the dominate twin ever try to do all the talking for the less dominate twin? yes____ no____

17. Are you a member of a mother of twins club or any club relating to twins? yes___ no____

18. Did you consult a professional or do any reading about twins? yes____ no___

19. Please indicate highest level of education.

	you	spose
High School	____	____
College	____	____
Grad. School	____	____

20. Did you have your twins' speech and language screened prior to their entering school? yes____ no____

21. Did you read aloud to your twins when they were infants and toddlers? yes___ no____

Thank you so very much for your help in doing this research project on twins. The results of this survey will be used in the project. If you would be willing to participate in possible further questions please sign your name below and indicate your phone number.

Name: _____

Signature: _____

Phone: _____

Pat Bentley
Speech and Language Pathologist
School Dist. 102

Name	Dillon	Moore	Ellis	Nuyt-tens	Stoller	Sunland	Caputo	Buch-anan
Sex	Male	Male	Male	Male	Male	Male	Male	Female
1st, 2nd 3rd, 4th Born	1	3	1	3	4	1	2	?
Problems in Pregnancy Birth or infancy	yes no yes	no yes yes	no yes no	no yes yes	yes no yes	no no no	no yes yes	no no no
Nursery School Experience	2 yrs	no	2 yrs	1 yr	2 yrs	2 yrs	now	?
Articulation or Language Delays	yes	yes	yes	yes	yes	yes	yes	no
Use of Twin Talk	yes	no	no	yes	no	no	yes	no
Duration of Twin Talk	18 mos through 4 yrs	N/A	N/A	9 mos through 3 yrs	N/A	N/A	6 mos Through ?	N/A
Twin Talk Understood by Others	no	N/A	N/A	Older Sibs	N/A	N/A	no	N/A
Years of Speech Therapy	3	1	2	3 cont.	1 and 3/4	2	?	N/A
Education of Parents Mother Father	College College	1 Coll H.S.	College College	1 Coll H.S.	College College	College H.S.	College College	College H.S.
Therapy During Preschool	yes	no	no	no	no	no	yes	no
Difficulties in School	no	yes	yes	yes	yes	no	N/A	no

Part Three

To summarize from my experience, work, readings, interviews, case studies, and from the twins' questionnaire I have found the following:

1. Identical twins tend to have delays in speech and language development.

2. Articulation disorders, low vocabulary scores, delays in expressive and receptive language skills, stuttering and a secret "twin talk" are among the speech and language problems found in identical twins.

3. The relationship between birth history factors (pregnancy complications and premature births) did not seem to affect the speech and language development of twins.

4. Birth order in the family did not appear to affect the twins' speech and language development.

5. Identical twin boys seem to have more speech and language delays than girl twins.

6. Nursery school experience did not appear to affect the speech and language development of twins.

7. Educational background of the parents did not seem to affect the development of the twins' speech and language.

8. Of the twins that did develop their own "twin talk" I found:

   a. that the "twin talk" of idioglossia consisted of their own made-up words, parts of words, words sounding like a foreign language, or their own language.

   b. that their "twin talk" could be understood only by each other and their siblings

   c. idioglossia began as early as six months and usually disappeared by the time the twins reached school age.

   d. that the twins spoke English as well as their own language.

   e. the twins spent a great deal of time together in each other's company and were rarely separated.

9. The earlier that the speech and language delays are diagnosed the better the chances of success and treatment. Early speech and language therapy help the twins academically, socially, and emotionally.

10. Most parents are not aware of the fact that at the age of three if their twins are having any difficulties at all or if the parents suspect any handicaping condition, their local school district must by law(P.L.94-142)screen the twins and if a handicap is found the school district must provide for that handicap.

The last pages of this chapter will be charts that parents can use as guidelines for their twins' speech and language development. These charts can be used as guides to speech and language development but individual differences must be kept in mind. Some children acquire speech and language much earlier than others, just as some children learn to ride bicycles or print their names more quickly than others. After consulting the charts, if parents have questions they should not hesitate to consult a speech pathologist.

If I were asked now what advice I would give to parents of twins regarding their twins' speech and language development I would agree with many of the suggestions made by Theroux and Tingley (no date)in their handout. I would make the following suggestions:

1. Know what speech is expected at what age (see charts). If there is a problem arrange to have your child screened as early as possible.

2. Contact your local school district to see when they hold their pre-school screening. Your local school district

must provide for any of your child's special needs as early as three years of age.

3. Check with your pediatrician to make sure there are no physical impairment that could inhibit proper speech. Have your childs' hearing tested.

4. Use proper speech yourself and make sure family members use good speech. Use only correct words and grammar.You and your other family members are the role models for speech and language. Your children listen to you and then try to imitate your speech and language.

5. Do not talk rapidly when speaking to your twins.

6. Separate your twins whenever possible, in nursery school, when reading to them, or to do errands, etc.

7. Do not let one twin talk for the other. Do not assume that if one twin expresses a need for something that the other twin wants it as well. Encourage each twin to express his own needs.

8. Do not give a child something if he or she gestures towards it or points to it. Encourage each child to name the object she or he wants.

9. Discourage baby talk. You may think it cute when the children are little but it isn't cute as they mature.

10. Encourage your twins to make and have their own friends - not just each other. Make sure they have time to be with these friends.

11. Talk to each child. Talk to them when you are doing things. Name things, explain things, express your thoughts and feelings. Ask them questions and encourage them to talk to you. Send them on errands especially ones where they have to be verbal.

12. Read to each child and play verbal games with them.

13. Join a Mother of Twins Club or play group in your neighborhood.

14. If you have any questions regarding your twins' speech and language development do not be afraid to seek answers. Ask speech pathologists questions. Read about speech and language development.

15. If your children are receiving help, be sure you know what they are working on. Ask what you can do to help. Work with the speech pathologist to help your child's speech and language.

16. For any additional information and resources contact:

The American Speech-Language-Hearing Association

10801 Rockville Pike

Rockville, Md. 20852

or call collect: (301) 897-8682.

In conclusion,this research project on speech and language delays has been fascinating learning experience as well as most enjoyable. I never expected to receive so much cooperation from so many people. I personally received letters from Nancy Segal(one of the top researchers in the field of twins) as well as the directors of the various twin clubs. Parents of the twins that I have worked with have also been most helpful and cooperative in my endeavors. I feel I have learned a great deal about identical twins and I feel I am able to share my learning and experience with parents of twins. I hope my project will help future researchers of identical twins. My only regret is that I did not have more twins and more parents of twins to research.

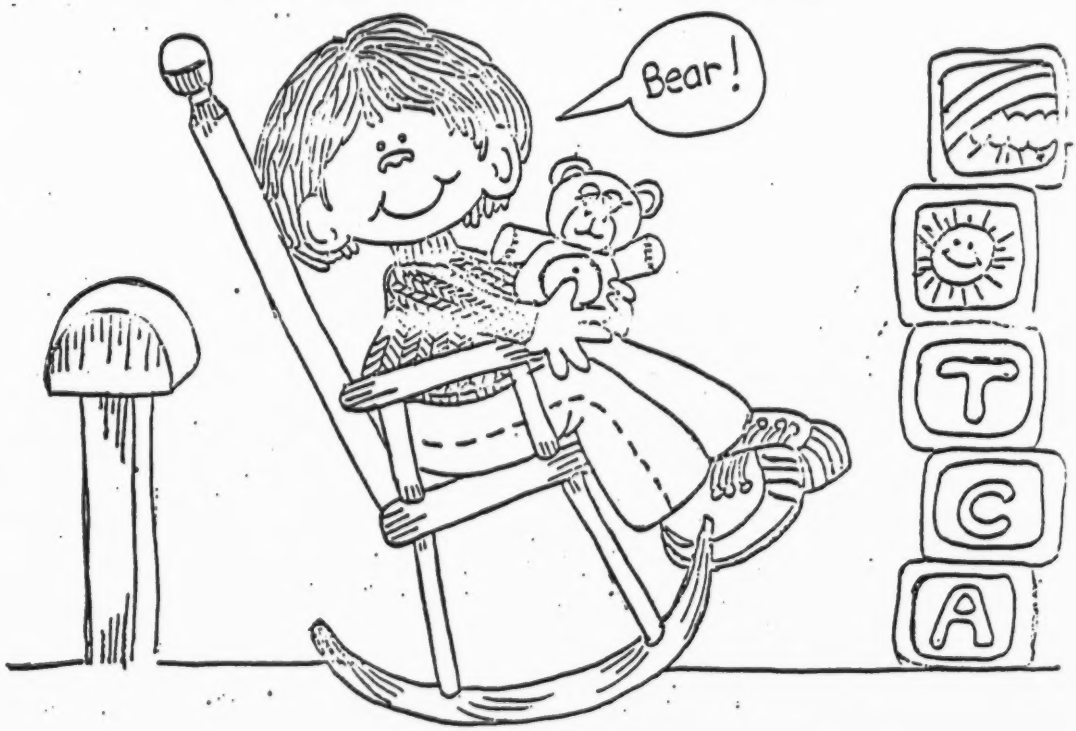
SPEECH SOUND DEVELOPMENT

Your child's speech sounds will develop as he grows. A baby makes early vocalizations around two or three months, babbles around 6 months and uses jargon from about 18 to 30 months. The majority of sounds a 3 year-old makes should be normal. Although he may not use all sounds correctly, he should be intelligible to strangers.

SUMMARY OF SPEECH SOUND DEVELOPMENT

Age	Consonants
3	p, w, wh, m, d, n, h
4	f, k, g
5	b, d, j, ng
6	l, t, sh (as in shoe), ch, r
7	s, z, v, th (as in thin)
8	zh (as in measure), th (as in that)

Norms taken from Fisher-Logemann test of Articulation Competence.



FIND YOUR CHILD'S SPEECH AND HEARING AGE

check one		UNDERSTANDING	CHILD'S AGE	TALKING	check one	
√ YES	√ NO				√ YES	√ NO
		Does your child hear and understand most speech in the home? Does your child hear and answer when first called? Does your child hear quiet speech? Does everyone who knows your child think he/she hears well (teacher, baby-sitter, grandparent, etc.)?	 5 YEARS	Does your child say all sounds correctly except perhaps *s* and *th*? Does your child use the same sentence structure as the family? Does your child's voice sound clear, like other children's?		
		Does your child understand conversation easily? Does your child hear you when you call from another room? Does your child hear television or radio at the same loudness level as other members of the family?	 2½–4 YEARS	Does your child say most sounds, except perhaps *r, s, th,* and *l*? Does your child sometimes repeat words in a sentence?		
		Does your child understand differences in meaning ("go—stop;" "the car pushed the truck—the truck pushed the car")? Can your child point to pictures in a book upon hearing them named? Does your child notice sounds (dog barking, telephone ringing, television sound, knocking at door and so on)?		Does your child use 200-300 words? Does your child use 2-3 word sentences? Does your child ask lots of "why" and "what" questions? Has your child's jargon and repeating disappeared? Does your child like to name things?		
		Can your child follow two requests ("get the ball and put it on the table")?	 1½–2 YEARS	Does your child have 10-15 words (by age 2)? Does your child sometimes repeat requests? Does your child ask 1-2 word questions ("where kitty? go bye-bye? more?")? Does your child put 2 words together ("more cookie")?		
		Has your child begun to respond to requests ("come here;" "do you want more")?	 9 MONTHS–1 YEAR	Does your child say words (8-10 words at age 1½; 2-3 words at age 1). (Words may not be clear).		
		Does your child turn or look up when you call? Does your child search or look around when hearing new sounds? Does your child listen to people talking?		Does your child enjoy imitating sounds? Does your child use jargon (babbling that sounds like real speech)? Does your child use voice to get attention?		
		Does your child respond to "no" and her/his name? Does your child notice and look around for the source of new sounds? Does your child turn her/his head toward the side where the sound is coming from?	 6 MONTHS	Does your child's babbling sound like the parent's speech, only not clear? Does your child makes lots of different sounds?		
		Does your child try to turn toward the speaker? Does your child smile when spoken to? Does your child stop playing and appear to listen to sounds or speech? Does your child seem to recognize mother's voice?	 3 MONTHS	Does your child babble? Does your child cry differently for different needs? Does your child repeat the same sounds a lot?		
TOTAL		Does your child listen to speech? Does your child startle or cry at noises? Does your child awaken at loud sounds?	 BIRTH	Does your child coo or gurgle?	TOTAL	

INSTRUCTIONS: Read each question through your child's age group and check yes (green) or no (yellow). Add the total and see below.

ALL GREEN: GOOD! Your child is developing hearing, speech, and language normally.

1-3 YELLOW: CAUTION! Your child may have delayed hearing, speech, and language development. Look at the "Reminders" section in this brochure.

MORE THAN 3 YELLOW: ACTION! Take your child for professional help. See "Where to Get Help" section.

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